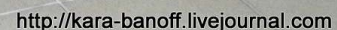


## Catalog

Categories: AIR / Bombs / Atomic bombs and charges / RYu-1 / 5F-48 Scalp /

★★★★★

In 1965-1970, "Skalp" type munitions were received into service by three long-range anti-submarine aviation regiments and two anti-submarine squadrons of the USSR Navy. Later, to replace the "Skalp" bomb, a new aviation nuclear depth bomb RYu-2 / 8F-59 "Skat" was created and produced in 1969-1970, which was universal in terms of carriers.



Model of the nuclear anti-submarine bomb RYu-1/5F-48 "Scalp". The red and white stripes indicate that this is a training device (photo 2014, <https://kabanoff.livejournal.com>)

- ## DISCUSSION





(C) Vadim874 1 other air guns and rockets 1 / photo ID197373

RussianPlanes.NET

Model of the nuclear anti-submarine bomb RYu-1/5F-48 "Scalp". The red and white stripes indicate that this is a training device (photo by Vadim874, 2016, <https://russianplanes.net/>)

**The purpose of the munition** was to destroy submarines, surface ships and ground targets in the absence or suppression of enemy air defense. There were no air or contact fuses. To destroy submarines in shallow water, a delay in response time was provided in addition to the existing values (20.4 and 44 seconds, respectively), equal to approximately 100 seconds from the moment the munition hit the water. This time was enough for the carrier aircraft to leave the danger zone. Aerodynamic braking of the bomb before splashdown was carried out using a brake parachute, which opened immediately before splashdown.

A unique hydrostatic sensor and a new automation unit (the third in the world of those developed by NII-1011) were developed for the bomb.



<http://kara-banoff.livejournal.com>



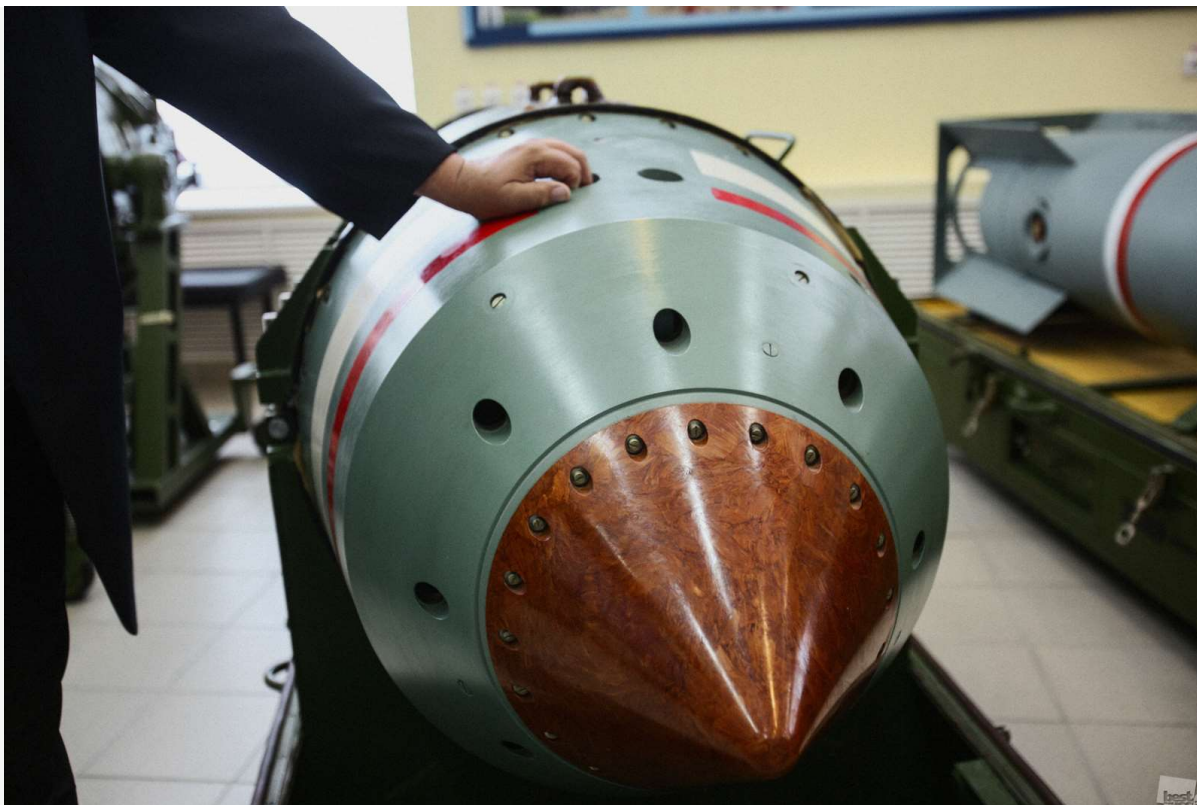


Model of the RYu-1/5F-48 "Scalp" nuclear anti-submarine bomb on display at the Start Nuclear Weapons Museum, Zarechny, 2014 (<https://kara-banoff.livejournal.com>)



Model of the RYu-1/5F-48 "Scalp" nuclear anti-submarine bomb on display at the Start Nuclear Weapons Museum, Zarechny, 2018 (<http://sevastopolzar.ru>)





Model of the RYu-1/5F-48 "Scalp" nuclear anti-submarine bomb on display at the Start Nuclear Weapons Museum (<http://photo.thebestofrussia.ru>)

#### Bomb performance characteristics :

Weight - 1600 kg

Power - 10 kt

Detonation depth - 200-400 m

Enemy submarine destruction radius - 600-700 m

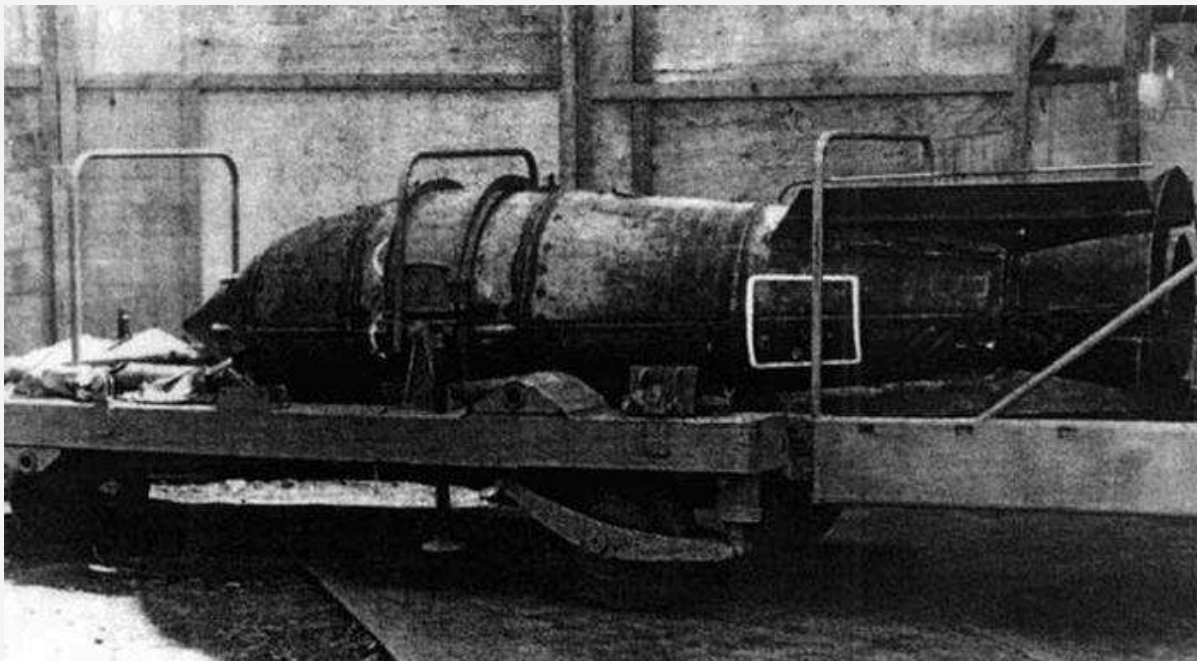
Bomb drop altitude - 2000-8000 m

**Charge type** - nuclear charge developed by NII-1011 (now VNIITF) with a capacity of 10 kt.

Some sources mention "a task to develop a bomb with a megaton-class charge", as well as the probable use of a thermonuclear charge.

#### Modifications:

- **5F-48 "Scalp"** - the main modification of the bomb and charge.



Anti-submarine nuclear bomb RYu-1/5F-48 "Scalp" on a transport trolley.

#### Carriers:

- Be-12SK / product ESK - amphibious aircraft, anti-submarine version for using munitions "Scalp". The aircraft carried 1 munition "Scalp" on a special beam holder weighing 78 kg in the bomb bay. The temperature microclimate was maintained in the bomb bay - the air temperature at the level of 16-23 degrees Celsius - this was an important condition for the reliable operation of the nuclear charge. Taking into account the significant weight of the bomb, a beam holder BD4-12SK with a Der-4-SK lock was installed in the cargo compartment. In view of the increased requirements for the thermal mode of the bomb, the cargo compartment was covered from the inside with thermal insulation, air for the heating system was bled from the engine compressors, electric heaters (product 107) were also installed, there were units for attaching a protective tent, used on the ground to retain heat in the cargo compartment with the flaps open. Additional electrical wiring for combat and emergency release control was installed along the sides of the boat. To prevent access to the cargo compartment after the bomb has been suspended, two locks with different keys are installed on the door in frame No. 31, which are stored in a sealed case.

The Be-12SK aircraft was developed in accordance with the resolution of the Central Committee of the CPSU and the Council of Ministers of the USSR dated August 17, 1961. The tactical and technical requirements were approved by the Deputy Commander-in-Chief of the Air Force for Armament on December 22, 1960. The model and materials for the preliminary design were reviewed between June 21 and 27, 1962, at OKB-49. The scope of modifications to the production aircraft was relatively small. From October 16, 1963 to January 12, 1964, the Be-12SK underwent joint state tests, which revealed a number of shortcomings. Joint tests were resumed on March 30, 1964, and were successfully completed on May 15, 1964.

**Status** : USSR / Russia

**Sources** :

Russian Nuclear Center: All-Russian Research Institute of Technical Physics named after Academician E.I. Zababakhin.// Snezhinsk, 2015.  
Nuclear warheads of the Air Force and Navy of the Soviet Union, <http://forums.airforce.ru/matchast/7621-dh-bp-vvs-i-ma-vmf-sovetskogo-soyuza/>

DISCUSS ON THE FORUM.....>

© 2009-2015 [militaryrussia.ru](http://militaryrussia.ru)  
Copying and use of materials  
is permitted only with a link  
to the corresponding article on the site

